

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) ~~An aircraft warning light comprising an array of LEDs and an optical unit positioned in front of the array of LEDs, the optical unit being adapted to propagate fractions of the light emitted from the LEDs in selected directions in accordance with a predetermined angular distribution.~~An aircraft lighting assembly for providing an external in flight warning light comprising a housing adapted to be mounted on the exterior of the aircraft, a transparent window protecting an opening in the housing, a light source comprising an array of LEDs disposed in the housing, and an optical unit also disposed in the housing behind the window and in front of the array of LEDs, the optical unit being adapted to collect the light emitted from the LEDs and propagate fractions of the collected light in accordance with a predetermined angular distribution such that light emerging through the window satisfies intensity and distribution requirements specified by aviation lighting regulations.

2. (currently amended) ~~An warning light assembly~~as in claim 1, wherein the warning light is a navigation warning light and the optical unit is adapted to redirect, in a substantially forward direction relative to the orientation of an

aircraft to which the warning light is affixed, at least some of the light which otherwise would be emitted from the LEDs in a substantially lateral direction relative to the orientation of the aircraft.

3. (currently amended) An ~~warning light~~ assembly as in claim 1, wherein the warning light is an anti-collision light and the optical unit is adapted to redirect, ~~in a substantially horizontal direction relative to the orientation of an aircraft to which the warning light is affixed,~~ towards the horizontal plane at least some of the light which otherwise would be emitted from the LEDs in directions divergent from a the horizontal plane, the horizontal plane being relative to the longitudinal axis of the aircraft to which the warning light is affixed ~~substantially vertical direction relative to the orientation of the aircraft.~~

4. (currently amended) An ~~warning light~~ assembly as in claim 1, wherein the optical unit is positioned with respect to the LED array such that substantially all of the light emitted from the LEDs is incident upon the optical unit.

5. (currently amended) An ~~warning light~~ assembly as in claim 1, wherein the optical unit employs one or more of refractive optics, diffractive optics and total internal reflection-based optics.

6. (canceled)

7. (currently amended) An warning-light assembly as in claim ~~6~~1, wherein the optical unit includes a first optical structure comprising a plurality of lenses adapted to collect light from the LEDs incident upon the optical unit.

8. (currently amended) An warning-light assembly as in claim 7, wherein each of the LEDs is associated with a respective one of the plurality of lenses.

9. (currently amended) An warning-light assembly as in claim 7, wherein the array of LEDs comprises a plurality of rows of LEDs and each of the rows is associated with a respective one of the plurality of lenses.

10. (currently amended) An warning-light assembly as in claim 8, wherein each lens of the plurality of lenses is positioned immediately in front of the LED with which the lens is associated.

11. (currently amended) An warning-light assembly as in claim 9, wherein each lens of the plurality of lenses is positioned immediately in front of the row of LEDs with which the lens is associated.

12. (currently amended) An warning-light assembly as in claim 8, wherein each lens of said plurality of lenses is spherical.

13. (currently amended) An ~~warning light~~ assembly as in claim 9, wherein each lens of said plurality of lenses is aspherical.

14. (currently amended) An ~~warning light~~ assembly as in claim 12, wherein said optical unit further comprises total internal reflection structures.

15. (currently amended) An ~~warning light~~ assembly as in claim 13, wherein said optical unit further comprises total internal reflection structures.

16. (currently amended) An ~~warning light~~ assembly as in claim ~~6~~7, wherein the optical unit further comprises a second optical structure adapted to transmit the collected light from the optical unit.

17. (currently amended) An ~~warning light~~ assembly as in claim 16, wherein the second optical structure comprises one or more prisms adapted to propagate the collected light in accordance with the predetermined angular distribution.

18. (currently amended) An ~~warning light~~ assembly as in claim 17, wherein the second optical structure comprises a plurality of prisms extending along one or both of the length and width of the LED array to form of series of ridges on an outer surface of the optical unit.

19. (currently amended) An ~~warning light~~ assembly as in claim 18, wherein the array of LEDs comprises a plurality of

strings of LEDs, each string being connected in parallel with the other strings of said plurality of strings and comprising a plurality of LEDs connected in series, and the prisms are positioned to extend across the LEDs of a plurality of the strings.

20. (currently amended) An ~~warning light~~assembly as in claim 19, wherein the ~~strings of LEDs~~LED strings are arranged in rows, and the prisms lie in a plane parallel to the array and are positioned to extend orthogonally with respect to ~~each other~~the rows.

21. (currently amended) An ~~warning light~~assembly as in claim 2, wherein the optical unit comprises a transparent body having a first face provided with a first optical structure and a second face provided with a second optical structure, the second face being opposed to the first face, the first optical structure being in the form of a plurality of convex lenses and the second optical structure being in the form of one or more prisms, and the convex lenses being positioned with respect to the one or more prisms such that light from the optical unit is propagated in accordance with the predetermined angular distribution.

22. (currently amended) An ~~warning light~~assembly as in claim 3, wherein the optical unit comprises a transparent body

having first and second opposed faces, the first face being provided with a plurality of aspherical cylindrical lenses.

23. (canceled)

24. (currently amended) An ~~warning-light~~assembly as in claim 123, wherein the optical unit is a molded, plastic element.

25. (currently amended) An ~~warning-light~~assembly as in claim 1, further comprising a spacer adapted to position the optical unit at a selected distance from the LEDs.

26. (currently amended) An ~~warning-light~~assembly as in claim 25, wherein the spacer is formed integrally with the optical unit.

27. (currently amended) An ~~warning-light~~assembly as in claim 25, wherein the LEDs are encapsulated in a potting compound and the potting compound is formed at a predetermined depth to provide the spacer.

28. (currently amended) An ~~warning-light~~assembly as in claim 1, wherein the LEDs are positioned with respect to the optical unit to provide a gap of up to 5 mm between the LEDs and the optical unit.

29. (currently amended) An ~~warning-light~~assembly as in claim 1, wherein the LEDs are positioned with respect to the optical unit to provide a gap of between 0.3 mm and 2 mm between the LEDs and the optical unit.

30. (currently amended) An warning light assembly as in claim 1, further comprising one or more IR LEDs.

31. (currently amended) An optical unit for use with an array of LEDs in an aircraft warning lighting assembly for providing an external in flight warning light, the optical unit comprising an optical structure adapted to collect propagate fractions of the light emitted from the LEDs and propagate fractions of the collected light in selected directions in accordance with a predetermined angular distribution to satisfy intensity and distribution requirements specified by aviation lighting regulations.

32. (withdrawn)

33. (withdrawn)

34. (withdrawn)

35. (withdrawn)

36. (withdrawn)

37. (withdrawn)

38. (withdrawn)

39. (withdrawn)

40. (withdrawn)

41. (withdrawn)

42. (withdrawn)

43. (withdrawn)

44. (withdrawn)

45. (withdrawn)

46. (withdrawn)

47. (currently amended) A lamp unit for an aircraft ~~warning-lighting~~ assembly for providing an external in flight warning light comprising an array of LEDs, an optical unit having an optical structure adapted to ~~propagate fractions of~~ collect light emitted from the LEDs and propagate fractions of the collected light in selected directions in accordance with a predetermined angular distribution to satisfy intensity and distribution requirements specified by aviation lighting regulations, and spacing means for holding the optical unit at a fixed distance from the LEDs.

48. (withdrawn)

49. (withdrawn)

50. (withdrawn)

51. (withdrawn)

52. (withdrawn)

53. (withdrawn)

54. (withdrawn)

55. (withdrawn)

56. (withdrawn)

57. (withdrawn)

58. (withdrawn)

59. (withdrawn)

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Amended*

60. (withdrawn)

61. (withdrawn)

62. (withdrawn)
